



A.D. 1854 N^o 1252.

S P E C I F I C A T I O N

OF

SOMERVILLE SCOTT ALISON.

MEDIUM FOR EXTERNAL APPLICATIONS
IN MEDICINE OR SURGERY.

L O N D O N :

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A.D. 1854 N° 1252.

**Medium for External Applications in Medicine or
Surgery.**

LETTERS PATENT to Somerville Scott Alison, Doctor of Medicine, of Park Street, Grosvenor Square, for the Invention of "**THE MANUFACTURE OF A NEW MATERIAL TO BE USED FOR EXTERNAL APPLICATIONS IN MEDICINE.**"

Sealed the 25th August 1854, and dated the 5th June 1854.

PROVISIONAL SPECIFICATION left by the said Somerville Scott Alison at the Office of the Commissioners of Patents, with his Petition, on the 5th June 1854.

I, SOMERVILLE SCOTT ALISON, Doctor of Medicine, of Park Street, Grosvenor
5 Square, do hereby declare the nature of the said Invention for "**THE MANUFACTURE OF A NEW MATERIAL TO BE USED FOR EXTERNAL APPLICATIONS IN MEDICINE**" to be as follows:—

This Invention consists of the use of lambskin and caoutchouc in the manufacture of a new material or medium for external applications for medical
10 and surgical purposes, such as fomentations, water dressings, and in lieu of poultices, and with the addition of irritants in place of blisters.

The outer surface of the skin is to be coated or covered with a solution of caoutchouc, which prevents evaporation, while the inner surface imbibes any fluid which may be intended to be applied externally to the human frame.
15 Although I claim especially the above manufacture, I do not limit myself to the use of lambskins only, or to the use of caoutchouc only.

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Secondly, this Invention consists of the use of a perforated skin (by preference lambskin), despending with any waterproofing matter, the object being to procure a medium for the evaporation of fluids where coolness and humidity are required; useful also on the administration of aeriform fluids, such as ether, chloroform, &c.

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SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Somerville Scott Alison in the Great Seal Patent Office on the 5th December 1854.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, SOMERVILLE SCOTT ALISON, of Park Street, Grosvenor Square, Doctor of Medicine, send 10 greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Fifth day of June, in the year of our Lord One thousand eight hundred and fifty-four, in the seventeenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said 15 Somerville Scott Alison, Her special license that I, the said Somerville Scott Alison, my executors, administrators, and assigns, or such others as I, the said Somerville Scott Alison, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United 20 Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an “**INVENTION FOR THE MANUFACTURE OF A NEW MATERIAL TO BE USED FOR EXTERNAL APPLICATIONS IN MEDICINE**,” upon the condition (amongst others) that I, the said Somerville Scott Alison, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of 25 the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Somerville Scott Alison, do hereby 30 declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This Invention has reference to the manufacture of a new material to be used for water dressings for wounds, fomentations, and other external applica- 35 tions in medicine; and consists of the use of the skin of the lamb or other

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animal, deprived of wool or other fibrous matters, and prepared according to the process called chamois curing; then re-dressed, and afterwards rendered impermeable to air and water on one surface, by the application of caoutchouc or other similar adhesive matter, or simply perforated, as herein-after described.

5 The process of chamois, or, as it is sometimes called, shamoy curing, consists in treating the inner skins of the lamb, kid, or other similar animals with oil, which is applied by pressure, and afterwards removed by alkalies; and skins so prepared are peculiarly soft, smooth, and absorbent. But instead of preparing the skins by this process, I sometimes cure the skiver, or skin, by means
10 of salt and alum.

My Invention relates to two kinds of material, the one perforated and the other impermeable; and the first part of my process consists in further cleansing and softening the skin by means of soap and warm water; it is then dried, and made soft, by rubbing with pumice stone. In this manner, impurities and
15 the remains of lime or other matters used in the curing of the skin are removed, and the fine texture is rendered looser, softer, more elastic, and more fit to absorb and retain a larger body of liquid than before. Although I generally use the inner skin only, when greater thickness is required, the entire skin, composed of what are called the chamois and the skiver is used. The
20 chamois is perforated with holes of various sizes, at any distances apart, and in a regular manner; this may be done by a punch, or any cutting instrument, or by passing the skin through suitable rollers, as is obvious. This material is to be used for cold liquid applications to the human body, or when heat is to be reduced by evaporation. The lambskin absorbs a large quantity of liquid, is
25 very retentive, and when wet becomes soft, pulpy, and adhesive, and a good conductor of heat. The perforations admit of the escape of vapour, and consequently the heat of the part to which the application is made is reduced. This perforated skin is cut into portions, applicable to the object desired; thus, ice-bags for the head may be made of it, and a capsule for holding opium
30 or other solid drugs for administration in obstetric medicine is very useful, from the fact that the agent dissolves and slowly makes its way through the perforations to act upon the parts, while from the softness of the capsule no inconvenience is experienced by the patient. By this contrivance, the medicine may be retained in the body sufficiently long to produce the desired
35 result, while otherwise it might be immediately rejected.

The second part of my Invention consists in rendering the chamois skin impermeable on one surface, so that it may be used for water dressings, fomentations, &c., as a plaister, or otherwise, when it is desired to afford a soft wet surface to the parts to be treated, or to place a body of liquid or semi-

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liquid medicine in immediate, uniform, and comfortable contact with the external surface of the patient for a lengthened period at the temperature of the body; or it may be used dry to retain the heat of the body, by preventing the abstraction of heat by atmospheric influence, or by evaporation, and for other purposes. The skin having been re-dressed and softened, as before 5 described, is rendered impermeable by applying a solution of caoutchouc of any colour or other water repellant material in such a manner as completely to coat the outer or harder surface of the skin without penetrating to the inner and finer one, which would otherwise be injured, and its retentive and adhesive properties destroyed; coats of these materials are applied in succes- 10 sion until the outer surface of the skin is rendered impermeable to air and water.

The solution I generally use is of the consistence of paste, and is applied by means of rollers, but a thinner solution may be spread by means of a brush or a spatula. The solvent of the india-rubber found the most useful is coal 15 tar naptha. The skin, when thus treated, is fit for use; but if it be desired to have a covering of greater thickness than one ply for increasing heat or moisture, a portion of the impermeable skin is taken, and there is laid upon it a piece of prepared skin, and the two are joined together by means of some adhesive material; in this way a third and fourth ply may be added. When 20 this impermeable material is intended to retain a considerable quantity of liquid, the plies must be united at their ends or edges only, in order that the liquid used may penetrate through the whole mass. To facilitate this permeation, and to promote the drying and preservation of the material, perforations are made in all the skins except the external one, which must remain impermeable. 25 Sometimes solid medicines may be placed between the plies, and occasionally slips or wires are enclosed, to adapt the material to the shape of the part treated, or to raise it from a very delicate surface, such as the eye. This impermeable skin is also cut and formed to suit different parts of the body, such as the forehead, the eye, and the female breast, and for a variety of similar 30 purposes. For the manufacture of plaisters it is peculiarly applicable, as it permits of the plaster being used in a semi-liquid, and consequently more efficacious state, for the impermeability of the outer surface prevents in a great measure atmospheric action, which dries up common plaisters. The impermeable skin may be used as described, or it may be covered on the outside 35 with silk, calico, or other like material, secured by some adhesive matter for the sake of ornament, or for imparting greater firmness to the application. Although the impermeable skin is not ordinarily perforated, when it is desired to lower the temperature of the body this may be done. When it is desired

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to fasten firmly these prepared skins, I employ the outer skin, or skiver, washed with water and the yolk of egg, and spread upon it some adhesive material, such as gelatine or resinous plaister; and to make it waterproof I render it impermeable by applying a coating of india-rubber, or the like, or I saturate
5 it with boiled linseed oil. These thin waterproof skins are sometimes employed to completely cover the plain prepared chamois skin and to retain its moisture; for this purpose they answer better than oiled silk, on account of their greater elasticity and flexibility. The oiled skin is suitable when oily applications are made, for oils dissolve india-rubber. The plain skin covered with oiled skin is
10 applicable when much pus is present, for an excessive discharge of pus has a tendency to injure the india-rubber.

Having now described the nature of my Invention, I wish it to be understood that I do not confine myself to the use of lamb or sheep skin, although I prefer it, as other skins, such as kid, may be used for the same purpose; and
15 I am aware that a material made of sponge and wool combined is used for fomentations, &c., which is essentially different from my Invention. And I make no claim to the mode, herein-before described, of rendering one surface of my preparation impermeable when used separately and apart from its application to the skin of the lamb or other skin, prepared as herein-
20 before described. But what I claim and desire to secure by these Letters Patent is, the manufacture of a new material for external applications in medicine in the several modes herein-before described.

In witness whereof, I, the said Somerville Scott Alison, have hereunto set my hand and seal, this Fourth day of December, 1854.

25 SOMERVILLE SCOTT ALISON, M.D. (L.S.)

LONDON:

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